

## Case 2924

### MELOIDAE Gyllenhal, 1810 and NEMOGNATHINAE Castelnau, 1840 (Insecta, Coleoptera): proposed precedence over HORIIDAE Latreille, 1802

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**Abstract.** The purpose of this application is to conserve the blister beetle names MELOIDAE Gyllenhal, 1810 (type genus *Meloe* Linnaeus, 1758) and NEMOGNATHINAE Castelnau, 1840 (type genus *Nemognatha* Illiger, 1807) by giving them precedence over HORIIDAE Latreille, 1802 (type genus *Horia* Fabricius, 1787). The family-group name ZONITINAE Mulsant, 1857 (type genus *Zonitis* Fabricius, 1775) is corrected to ZONITIDINAE.

**Keywords.** Nomenclature; taxonomy; Coleoptera; blister beetles; MELOIDAE; NEMOGNATHINAE; HORIIDAE; ZONITIDINAE.

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1. In 1802 Latreille (p. 182) introduced the name HORIALES (corrected to HORIIDAE), type genus *Horia* Fabricius, 1787, p. 164 (type species *Horia fabriciana* Betrem, 1929, p. xxvii, by subsequent designation by Betrem, 1929, p. xxvii). This was the first work to use named genera as the foundation of family-group names of Coleoptera (see Watt, 1975, pp. 32–33). In 1810 Gyllenhal (p. 481) published the name MELOOIDES based on the type genus *Meloe* Linnaeus, 1758, p. 419 (type species *Meloe proscarabaeus* Linnaeus, 1758, p. 430, by subsequent designation by Latreille, 1810, p. 419) for the same group of beetles; under Article 35d(i) of the Code the incorrectly formed name MELOOIDES must be corrected to MELOIDAE. Virtually all workers since LeConte (1853, p. 328) and Lacordaire (1859, p. 663) have placed *Horia* and *Meloe* in the same family. Consequently, as indicated by Watt (1975, pp. 32–33) and Bologna (1991, p. 68, note 1), MELOIDAE Gyllenhal is formally a junior subjective synonym of HORIIDAE Latreille.

2. The family name MELOIDAE Gyllenhal, 1810 was widely used in the 19th century (e.g. LeConte, 1862; Champion, 1892; Reitter, 1895) and now has gained general acceptance, appearing in all major publications (e.g. Borchmann, 1917; Van Dyke, 1928; Denier, 1935; Cros, 1940; Kaszab, 1956, 1959, 1969; Selander, 1964, 1991; Pinto & Selander, 1970; Bologna, 1991). A family-group name based on *Horia* has not been used, except in a very restricted sense (see para. 5 below), since the early decades of the 19th century (e.g. Latreille, 1802; Castelnau, 1840).

3. Several other family-group names used as synonyms of HORIIDAE were introduced in the early literature. They include CANTHARIDAE Latreille, 1802 (p. 384) based on *Cantharis* sensu Geoffroy (1762, p. 339) (= *Lytta* Fabricius, 1775; see Watt, 1975, p. 32), a junior homonym or deliberate misidentification of *Cantharis* Linnaeus, 1758 (p. 400), LYTTIDAE Wellman, 1910 (p. 220), and several names not based on included nominal genera (see Borchmann, 1917, pp. 3–4). None of them has gained acceptance by entomologists or others. CANTHARIDAE Imhoff, 1856 is in use (see, for example, Crowson, 1955, p. 69; Watt, 1975, pp. 32–33; Lawrence & Newton, 1995, p. 784) for an unrelated group of beetles which includes *Cantharis* Linnaeus, 1758.

4. The family MELOIDAE is well known for its unique hypermetabolous development. The adults of several species have a reputation as crop pests. The larvae of certain genera are parasitoids of grasshopper eggs and are of some importance to natural and biological control. In addition the family has gained notoriety as the source of cantharidin, a natural vesicant which is responsible for the group's common name, the blister beetles. Consequently, to use the senior name HORIIDAE instead of MELOIDAE would affect not only an extensive taxonomic literature but more than 150 years of literature in general, agricultural, medical and veterinary entomology.

5. The subfamily HORIINAE Latreille, 1802 has primarily been used in a restricted sense to include the genera *Horia* Fabricius, *Synhoria* Kolbe, 1897 and *Cissites* Latreille, 1804 (see MacSwain, 1956; Kaszab, 1959, 1969). A subfamily including a larger assemblage of genera such as *Zonitis* Fabricius, 1775, *Nemognatha* Illiger, 1807, *Apalus* Fabricius, 1775, *Sitaris* Latreille, 1802, has been variously named ZONITINAE Mulsant, 1857, p. 164, type genus *Zonitis* Fabricius, 1775, p. 126 (type species *Zonitis flava* Fabricius, 1775, p. 127, by subsequent designation by Selander, 1987, p. 341) or NEMOGNATHINAE Castelnau, 1840, p. 280, type genus *Nemognatha* Illiger, 1807, p. 333 (type species by monotypy *Zonitis vittata* Fabricius, 1801, p. 24), whether or not it is defined to include *Horia* Fabricius. However, the senior name for a subfamily defined to include *Horia* is HORIINAE, and ZONITINAE and NEMOGNATHINAE are its junior subjective synonyms.

6. In the extensive literature on this family the name HORIINAE has been used only once (by Selander, 1991) as the name of the subfamily which includes but is not restricted to *Horia*, *Synhoria* and *Cissites*. This assemblage has been named ZONITINAE (e.g. Escherich, 1897; Wellman, 1910) or, much more commonly, NEMOGNATHINAE (e.g. Cockerell, 1910; Borchmann, 1917; Denier, 1935; Cros, 1940; Pardo Alcaide, 1950; Enns, 1956; Selander, 1964; Pinto & Selander, 1970; Bologna, 1991).

7. The beetle family-group name ZONITINAE Mulsant, 1857 is a homonym of the widely used gastropod name ZONITIDAE Mörch, 1864 (type genus *Zonites* Montfort, 1810; type species by original designation and monotypy *Helix algira* Linnaeus, 1758, p. 769). However, this homonymy is eliminated by mandatory correction of ZONITINAE Mulsant to ZONITIDINAE under Article 35d(i), since the correct family-group name based on the feminine generic name *Zonitis* Fabricius is ZONITIDINAE (from *Zonitis*, genitive *Zonitidos*); the name based on the masculine generic name *Zonites* is ZONITINAE (from *Zonites*, genitive *Zonitos*) (see Appendix D of the Code, Table 2, Part B, cases 17, 20). Entomologists have never used the spelling ZONITIDINAE. The only use of a family-group name based on *Zonitis* among recent authors was by MacSwain (1956), Kaszab (1956, 1959, 1969) and Bologna (1983).

With these exceptions there has been complete acceptance of the name NEMOGNATHINAE for the past 80 years (e.g. Borchmann, 1917; Denier, 1935; Cros, 1940; Pardo Alcaide, 1950; Enns, 1956; Selander, 1964; Gupta, 1978; Bologna, 1991).

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to rule that the family-group names MELOIDAE Gyllenhal, 1810 and other family-group names based on *Meloe* Linnaeus, 1758 and NEMOGNATHINAE Castelnau, 1840 and other family-group names based on *Nemognatha* Illiger, 1807 are to be given precedence over HORIIDAE Latreille, 1802 and other family-group names based on *Horia* Fabricius, 1787 whenever they are considered to be synonyms;
- (2) to place on the Official List of Generic Names in Zoology the following names:
  - (a) *Meloe* Linnaeus, 1758 (gender: masculine), type species by subsequent designation by Latreille, 1810, *Meloe proscarabaeus* Linnaeus, 1758;
  - (b) *Nemognatha* Illiger, 1807 (gender: feminine), type species by monotypy *Zonitis vittata* Fabricius, 1801;
  - (c) *Horia* Fabricius, 1787 (gender: feminine), type species by subsequent designation by Betrem, 1929, *Horia fabriciana* Betrem, 1929;
  - (d) *Zonitis* Fabricius, 1775 (gender: feminine), type species by subsequent designation by Selander, 1987, *Zonitis flava* Fabricius, 1775;
- (3) to place on the Official List of Specific Names in Zoology the following names:
  - (a) *proscarabaeus* Linnaeus, 1758, as published in the binomen *Meloe proscarabaeus* (specific name of the type species of *Meloe* Linnaeus, 1758);
  - (b) *vittata* Fabricius, 1801, as published in the binomen *Zonitis vittata* (specific name of the type species of *Nemognatha* Illiger, 1807);
  - (c) *fabriciana* Betrem, 1929, as published in the binomen *Horia fabriciana* (specific name of the type species of *Horia* Fabricius, 1787);
  - (d) *flava* Fabricius, 1775, as published in the binomen *Zonitis flava* (specific name of the type species of *Zonitis* Fabricius, 1775);
- (4) to place on the Official List of Family-Group Names in Zoology the following names:
  - (a) MELOIDAE Gyllenhal, 1810 (type genus *Meloe* Linnaeus, 1758), with the endorsement that it and other family-group names based on *Meloe* are to be given precedence over HORIIDAE Latreille, 1802 and other family-group names based on *Horia* Fabricius, 1787 whenever they are considered to be synonyms;
  - (b) HORIIDAE Latreille, 1802 (type genus *Horia* Fabricius, 1787), with the endorsement that it and other family-group names based on *Horia* are not to be given priority over MELOIDAE Gyllenhal, 1810 and other family-group names based on *Meloe* Linnaeus, 1758 or NEMOGNATHINAE Castelnau, 1840 and other family-group names based on *Nemognatha* Illiger, 1807 whenever they are considered to be synonyms;
  - (c) NEMOGNATHINAE Castelnau, 1840 (type genus *Nemognatha* Illiger, 1807), with the endorsement that it and other family-group names based on *Nemognatha* are to be given precedence over HORIIDAE Latreille, 1802 and other family-group names based on *Horia* Fabricius, 1787 whenever they are considered to be synonyms;



- (d) ZONITIDINAE Mulsant, 1857 (type genus *Zonitis* Fabricius, 1775) (correct original spelling of ZONITINAE);
- (5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name ZONITINAE Mulsant, 1857 (incorrect original spelling of ZONITIDINAE).

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